

such modifications and variations may be effected without departing from the spirit and scope of the present invention.

What is claimed and desired to be secured by Letters Patent is:



1. An insert earphone for audiometric testing comprising>

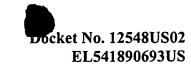
a housing;

a receiver located in the housing and having an output port, the receiver for electrically coupling with an audio signal source;

a flexible eartip for acoustic sealing with an ear canal of a user; and

a tube nipple having a first end and a second end, the first end acoustically coupled to the output port of the receiver and the second end acoustically coupled to the flexible eartip, the tube nipple and housing being configured and arranged such that the angle between a longitudinal axis of the tube nipple and the vertical axis is obtuse.

- The insert earphone of claim 1 wherein the angle is approximately
  degrees.
- 3. The insert earphone of claim 1 further comprising a flexible channel located between the output port of the receiver and the first end of the tube nipple.
- 4. The insert earphone of claim 1 wherein the flexible eartip comprises a flexible tube portion and a foam eartip portion, and wherein at least a portion of the flexible tube portion extends through the foam eartip portion.



5. The insert earphone of claim 4 wherein the tube nipple is rigid and wherein the second end of the tube nipple is positioned within the flexible tube portion of the flexible eartip.

302×

- nipple is located within the housing and the second end of the tube nipple is located externally to the housing, and further comprising an acoustic damper-located in the tube nipple proximate the first end of the tube nipple.
- 7. The insert earphone of claim 3 wherein the flexible channel has a first end and a second end, and wherein the first end of the flexible channel is coupled to output port of the receiver and the second end of the flexible channel is coupled to the first end of the tube nipple.
- An insert earphone for audiometric testing comprising:

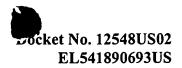
a housing;

a receiver located in the housing and having an output port, the receiver for electrically coupling with an audio signal source;

a flexible eartip for acoustic sealing with an ear canal of a user, the flexible eartip having a foam eartip portion and a flexible tube portion; and

a rigid tube nipple having a first end and a second end, the first end of the rigid tube nipple acoustically coupled to the output port of

Sub



the receiver and the second end of the rigid tube nipple acoustically coupled to the flexible tube portion of the flexible eartip.

9. The insert earphone of claim 8 wherein the second end of the rigid tube nipple is positioned within the flexible tube portion of the flexible eartip.



- 10. The insert earthone of claim 8 wherein the rigid tube nipple and the housing are configured and arranged such that the angle between a longitudinal axis of the rigid tube nipple and the vertical axis is obtuse.
- 11. The insert earphone of claim 10 wherein the angle is approximately 118 degrees.
- 12. The insert earphone of claim 8 further comprising a flexible channel located between the output port of the receiver and the first end of the rigid tube nipple.
- 13. The insert earphone of claim 12 wherein the flexible channel has a first end and a second end, and wherein the first end of the flexible channel is coupled to the output port of the receiver and the second end of the flexible channel is coupled to the first end of the rigid tube nipple.

14. The insert earphone of claim-8 wherein the first end of the rigid tube nipple is located within the housing and the second end of the rigid tube nipple is located externally to the housing, and further comprising an acoustic damper located in the rigid tube nipple proximate the first end of the rigid tube nipple.

904>

An insert earphone for audiometric testing comprising:

a housing;

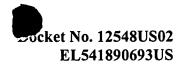
a receiver located in the housing and having an output port, the receiver for electrically coupling with an audio signal source;

a flexible eartip for acoustic sealing with ear canal of a user; a tube nipple having a first end and a second end, the first end located within the housing and acoustically coupled to the output port of the receiver and the second end located externally to the housing and acoustically coupled to the flexible eartip; and

an acoustic damper located in the tube nipple proximate the first end of the tube nipple.

Sub 7

16. The insert earphone of claim 15 wherein the tube nipple and the housing are configured and arranged such that the angle between a longitudinal axis of the tube nipple and the vertical axis is obtuse.



- 17. The insert earphone of claim 16 wherein the angle is approximately 118 degrees.
- 18. The insert earphone of claim 15 wherein the flexible eartip comprises a flexible tube portion and a foam eartip portion, and wherein at least a portion of the flexible tube portion extends through the foam eartip portion.
- 19. The insert earphone of claim 18 wherein the tube nipple is rigid and wherein the second end of the tube nipple is positioned within the flexible tube portion of the flexible eartip.
  - 20. The insert earphone of claim 15 further comprising a flexible channel located between the output port of the receiver and the first end of the tube nipple.
  - 21. The insert earphone of claim 20 wherein the flexible channel has a first end and a second end, and wherein the first end of the flexible channel is coupled to the output port of the receiver and the second end of the flexible channel is coupled to the first end of the tube nipple.

